USER MANUAL

TEST UNIT HSF 300 ATEX

Title:	TEST UNIT HSF 300 ATEX
Customer:	HYTOR A/S
Customer ref.:	289853
HYTOR ref. no.:	289353
Ref. doc.:	41-01-0080
Id. no:	41-34-0001-R01

Revision history:

Rev.	Issue date	Description	Created by	Approved by
01	31.10.2014	ISSUED FOR COMMENTS	KR	PF

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INDEX

1. SAFETY PRECAUTIONS 3
2. MOUNTING 3
3. BEFORE START UP 3
4. OPERATION 4
5. MAINTENANCE 4
6. STORAGE 5
7. DISPOSAL 5
8. MARKING 5
9. FAULT FINDING 6
10. PROCESDIAGRAM 7
11. ITEM LIST 8
12. DECLARATION OF CONFORMITY 9

1. SAFETY PRECAUTIONS

This test unit is designed for hydrostatic pressure test of equipment with water (H2O) supplied directly from the public service system.

Do not use any other test fluid than water without Hytor's acceptance.

It is of important to clarify that the attached equipment can withstand the pressure and fluid (water) equal to the test unit data.

The supply power is compressed air with max. 10 bar pressure.

The area where this test is planned to be carried out must be secured according to safety regulations.

Never stand in the front of the outlet ports where water under high pressure may occur at faulty operation or faulty hook up. This may result in person body damages or material damages.

Noise will be at a level equal to 80 dB(A).

Always use protection goggles when operating with high pressure.

The test unit is equipped with an emergency stop button that stops the liquid pump by removing the air supply.

Pressure relief valve is not built into the test unit as this component have been considered to have no influence on the machine safety.

The air regulating valve has a maximum outlet air pressure which corresponds to maximum hydrostatic pressure.

2. MOUNTING

Place the test unit, which is a mobile unit, on horizontal ground.

3. BEFORE START UP

Unload the pressure regulating valve, Air regulator, by turning the adjustment screw to the left (anti clockwise) to start the unit without load.

Connect a test gauge on the outlet marked "Test gauge" and close the corresponding valve.

Connect a data recorder on the outlet marked "Pressure recorder" and close the corresponding valve.

Close the valve marked "Vent".

Connect the equipment to be tested to the outlet marked "Pressure Out" and close the corresponding valve.

Connect water to the inlet marked "Water inlet".

Close the valve marked "Air inlet" and connect pressure air to the inlet marked the same way.

4. OPERATION

This test unit has been produced according to documents below:

Flow diagram	41-10-0083
Item list	41-01-0080
Certifcate of Conformity	41-34-0001

The output is adjustable up to maximum pressure as indicated on the diagram.

Open the valve marked ”Air valve”.

Adjust the air pressure gradually to the required level by turning the adjustment screw, Air regulator, to the right (clockwise). The pressure can be seen on the pressure gauge marked “Pressure out”.

Bleed, if necessary, the system by opening the valve marked “Vent” until airless water flows out of the outlet opening. Close the valve when airless water flows in a steady stream.

Open the valve marked “Test gauge” and “Pressure recorder” gradually to protect these against peak pressure and damage.

Close the valve marked “Pressure out” to keep the test pressure inside the attached equipment.

Reduce the air pressure to 0 bar and remove the air hose to avoid inexpedient refilling of the system and to prevent the risk of personal body damage caused by fall in hoses lying in the work area.

Remove the water hoses of the same reason.

Unload the system after finished pressure test by opening the valve marked “Vent”.

Open the valve marked “Pressure out”.

Check that all gauges shows 0 bar.

The system can now be disassembled.

5. MAINTENANCE

The test unit requires no specific maintenance as stainless steel materials and maintenance free components have been used.

However, always clean and check the unit for possible damages.

6. STORAGE

The test unit requires no specific considerations regarding storage.

All openings should be plugged to prevent contamination due to dirt in the system.

7. DISPOSAL

The unit must be disassembled and disposed according to domestic and international directives in order to protect the environment.

No particular polluting materials has been used in the design.

8. MARKING

The test unit has a name plate including:

Hytor contact data

Unit type description

Serial no.

Year of manufacture

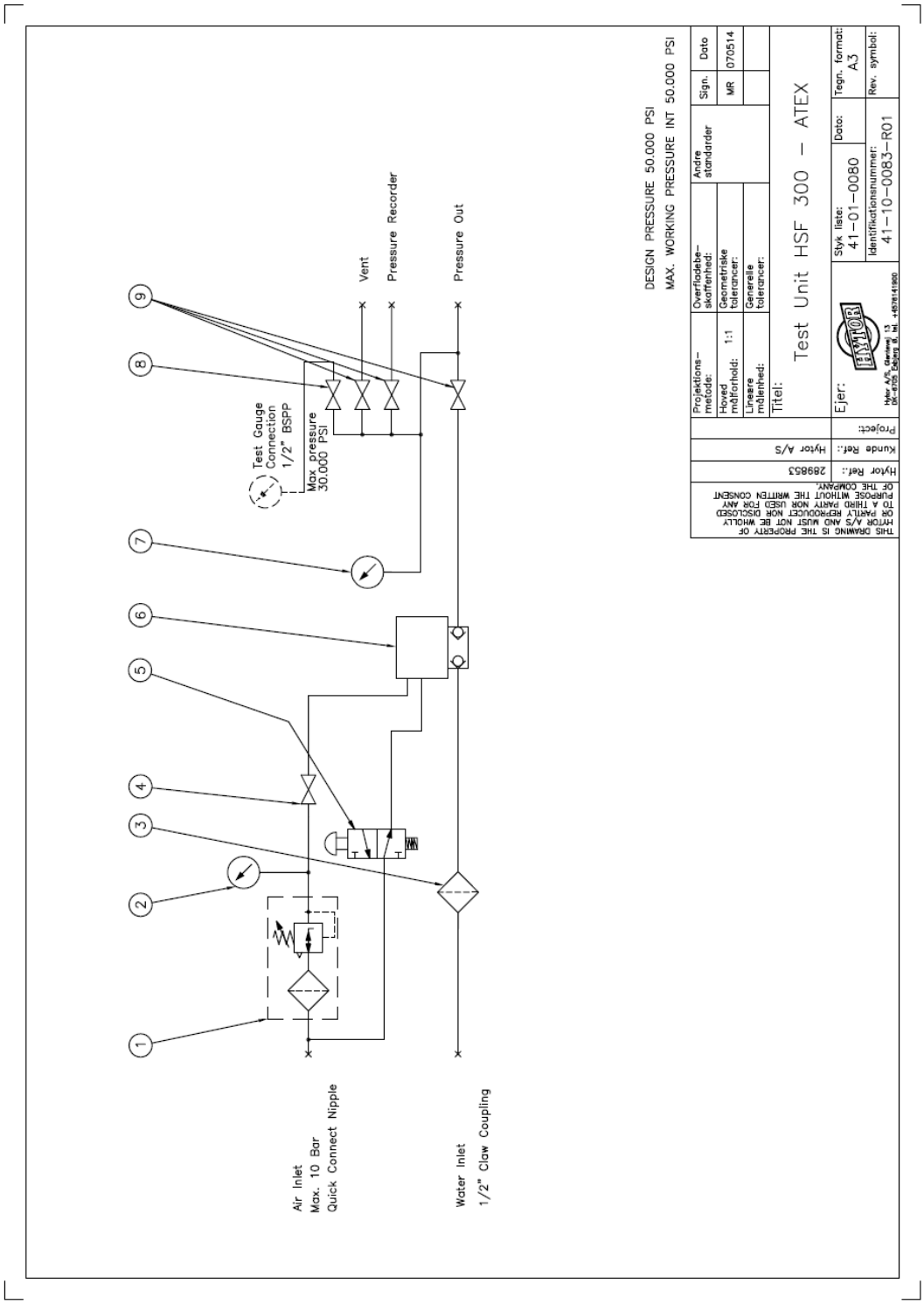
CE marking acc. to directives 2006/42/EC (97/38) and 94/9/EC

The technical dossier will be stored at Hytor A/S for min. 10 years after production date.

9. FAULT FINDING

The pump does not work	The pump gets no air to the drive section	Open the valve, item 4
		Increase the pressure on the regulator, item 1
		Check the gauge, item 7
	The pump gets no water to the hydraulic section	Check the water hose connection
	The pump is defect	Repair or shift the pump
The outlet pressure is to low	The air drive pressure is to low	Increase the pressure on the regulator, item 1
		Check the gauge, item 7
		Repair or shift the pump

10. PROCESDIAGRAM



11. ITEM LIST

Item no.:	Qty.:	Description:	Manufacturer:	Part no.:	TAG no.:
1	1	Bifold filter-regulator, ½" NPTF, 0-10 bar, SS316	BIFOLD	SH12FRSM10X4L46	
2	1	Pressure gauge Ø63, ¼" NPT back, Front ring, Glycerine filled glass, 0-10 bar, SS316/SS304 housing	ARMATURENBAU	06B00000100TEN2G	
3	1	Tee Filter 1/2", Viton, 250 Micron, SS316 WP 6.000 PSI	PARKER	8A-FT8-250-SS	
4	1	Panel Mount Ball Valve, ½" NPT (F), 64 bar, SS316 to NACE, Marine handle kit	ALCO	SB4NSM	
5	1	3/2 - Way manually operated control valve, hold in activated position - spring return, ¼" NPTF, SS316	VERSA	VIZ330231612 5REP	
6	1	Liquid Pump, 1.5HP, ¼" S/P outlet, ½" NPT Muffler, Max outlet pressure 50.000 PSI	HASKEL	HSF300ATEX	
7	1	Pressure gauge, Ø100 double scale, ¼" H/P, Front ring, Glycerine filled, 60.000 PSI/bar, SS316	ARMATURENBAU	10BP0000H040ECH2G	
8	1	2 Way Angle Valve ¼" M/P, 60.000 PSI, SS316	BUTECH	60UV42VPM	
9	3	2 Way Straight Valve ¼" M/P, 60.000 PSI, SS316	BUTECH	60UV41VPM	
	1 LOT	½" Fitting, A-LOK, SS316	PARKER		
	1 LOT	¼" Fitting, A-LOK, SS316	PARKER		
	1 LOT	¼" M/P, Fitting, SS316	BUTECH		
	1 LOT	¼" M/P, Tubing, 0,083" ID, SS316	BUTECH		
	1 LOT	½" OD, Tubing, 0,065" WT, SS316	SANDVIK		
	1 LOT	¼" OD, Tubing, 0,065" WT, SS316	SANDVIK		

12. DECLARATION OF CONFORMITY

EF-OVERENSSTEMMELSESERKLÆRING
EC-DECLARATION OF CONFORMITY

ID No.	:	41-81-0034-R01
Fabrikant *Manufacturer*	:	HYTOR A/S Høgevej 8 6705 Esbjerg Ø. Danmark

erklærer hermed at
hereby declares that

Udstyr *Equipment*	:	Type : 41-10-0083 Unit : TEST UNIT HSF 300 ATEX Owner : Hytor A/S

Er fremstillet I henhold til:
2006/42/EF - Maskindirektivet
97/23/EF - PED, artikel 3.3
Has been manufactured according to:
2006/42/EC - Machinery Directive
97/23/EC - PED Pressure Equipment Directive, article 3.3

Designtryk *Design pressure*	:	50.000 PSI
Atex mærkning *Atex marking*	:	II 2 G c T6
Kunde ref. nr. *Customer ref. no.*	:	289853
HYTOR ref. nr. *HYTOR ref. no.*	:	289853

Navn: *Name:*	Stilling: *Position:*	Underskrift: *Signature:*	Dato: *Date:*
Jonas Månsson	Project Coordinator	HYTOR A/S Høgevej 8 - 6705 Esbjerg Ø Tlf. 76 14 19 00 - Fax 76 14 19 09	31-10-2014